Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SOME SEA SHELLS FROM LA PUSH, WASH.

By Albert B. Reagan, La Push, Wash.

IN a picturesque little spot on the Pacific coast about thirty-six miles southeast of Cape Flattery, Washington, is the Indian village of La Push. To the northwest of the village, extending up the coast for many miles, are series of islets, reefs and shallow ocean patches. Facing the village to the southwest and south is Quileute bay, partly inclosed on the southeast by a series of islands, called the Giants' Graveyard, and on the northwest by James island. This bay is small and is exposed to the southwest storms in winter. It was along the shores of this bay and the shore extending northwestward from James island that most of the shells listed below were collected.

The collecting of the shells extended over a period of two years, 1905-'07, but most of the specimens were collected in 1906. The severe weather of January, 1907, killed many of the species; so but few shells were found on the beach this year (1907).

An examination of the shells shows that they are very variable, both in color, shape, size and sculpture, and seem to occupy an intermediate position between the shells of the Alaskan coast and those of the California coast to the south. This variable condition is probably due to the exposed condition of the coast, to the winter storms, and to the fact that the Japan current washes the shore-line here.

The shells were collected by the writer and his wife. Prof. Trevor Kincaid, of the University of Washington, classified them, and the drawings from 1 to 71 were made by Messrs. Gordon B. Hobucket and Frank L. Bennett. The remaining drawings were made by the writer and his wife.

The number of each drawing here given is the number of that respective shell in the writer's collection.

Duplicate specimens of the shells given below are to be found in the museum of the Kansas Academy of Science.

Echinarachinus excentricus. Sea biscuit.

Plate IV, fig. 15.

This species is not found in the waters at La Push, but on the sandy beaches towards Neah bay and Cape Flattery. The specimen here figured was presented to the writer by Policeman Hobucket (Ind.), who found it on the beach near the mouth of the Suez river, seven miles southeast of Cape Flattery.

Strongylocentratus drobachensis. Sea-egg, Sea-urchin.
Plate IV, fig. 93.

This species is very plentiful. It is one of the sea species used as food by the Indians. It grows to be quite large.

Terebratella (*Terebratalia*) *transversa* Somerby.
Plate IV, figs. 19*a* and *b*.

This species is not numerous.

Glycimeris (*Panopæa*) *generose* Gould.
Plate II, fig. 87.

This is a Neah bay shell from the strait of Juan de Fuca. The writer has not seen it on the Pacific coast.

Pecten hericeus Gould.
Plate III, fig. 80.

This species is quite abundant.

Hinnites giganteus Gray.
Plate II, figs. 59*a*, *b*, *c*.

The shell of this species is very variable. It is an abundant species.

Placunenomia macroschisma Deshayes.
Plate III, fig. 75.

This species is quite general along the coast.

Mytilus californicus Conrad.
Plate I, figs. 13*a*, *b*.

This species is the most abundant shell-fish on the coast. It lives on the rocks at tide-line, and the rocks are completely covered with its representatives. They stick to the rocks so tightly that it is with difficulty that they are pulled from their lodgement. It is this "mussel" that the Indians are so fond of. They gather them by the basketful, put them, shell and all, into a pot and boil them. Then the "mussel" meat is scraped from the shell and eaten. They also eat them raw; also, bake them—that is, they dig a pit, throw hot rocks into it, then put the clams on the heated rocks, and cover the rocks and "mussels" up with dirt. These they leave till the next day. The "mussels" are then dug up and make excellent eating.

Pholadidea ovoidea Gould.
Plate I, figs. 5*a*, *b*.

The shell of this species is very frail and easily broken. Only one whole valve was seen. The species is not numerous.

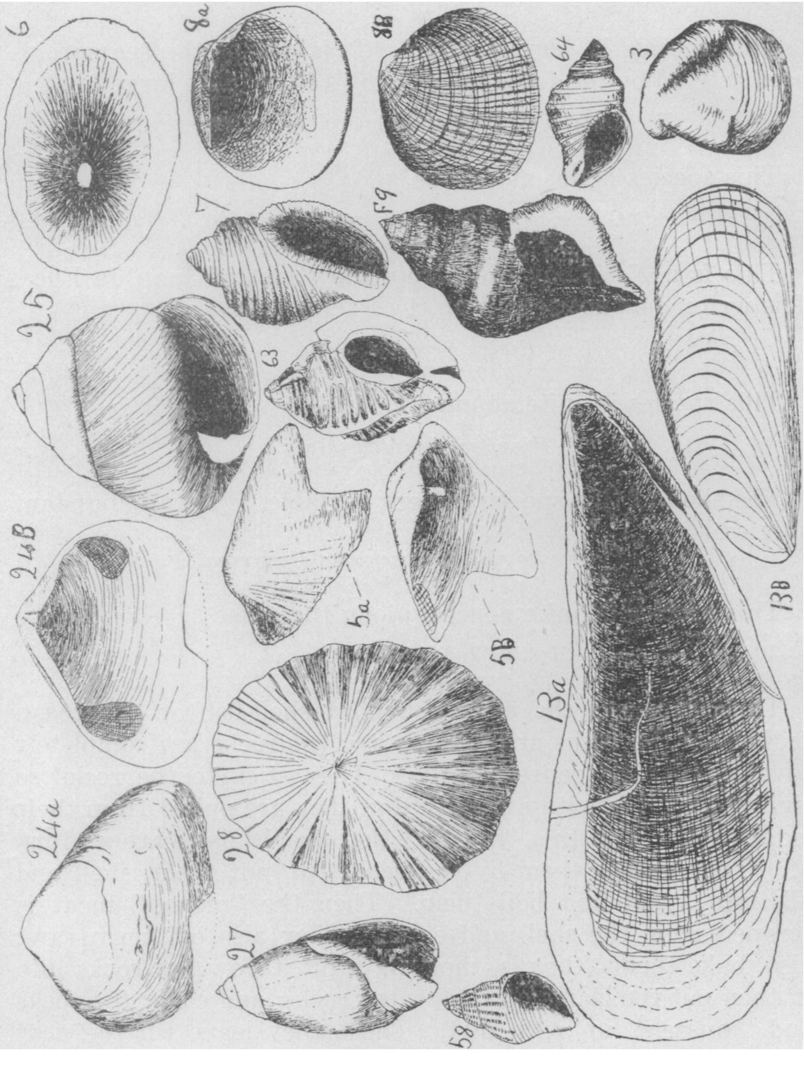

PLATE I.

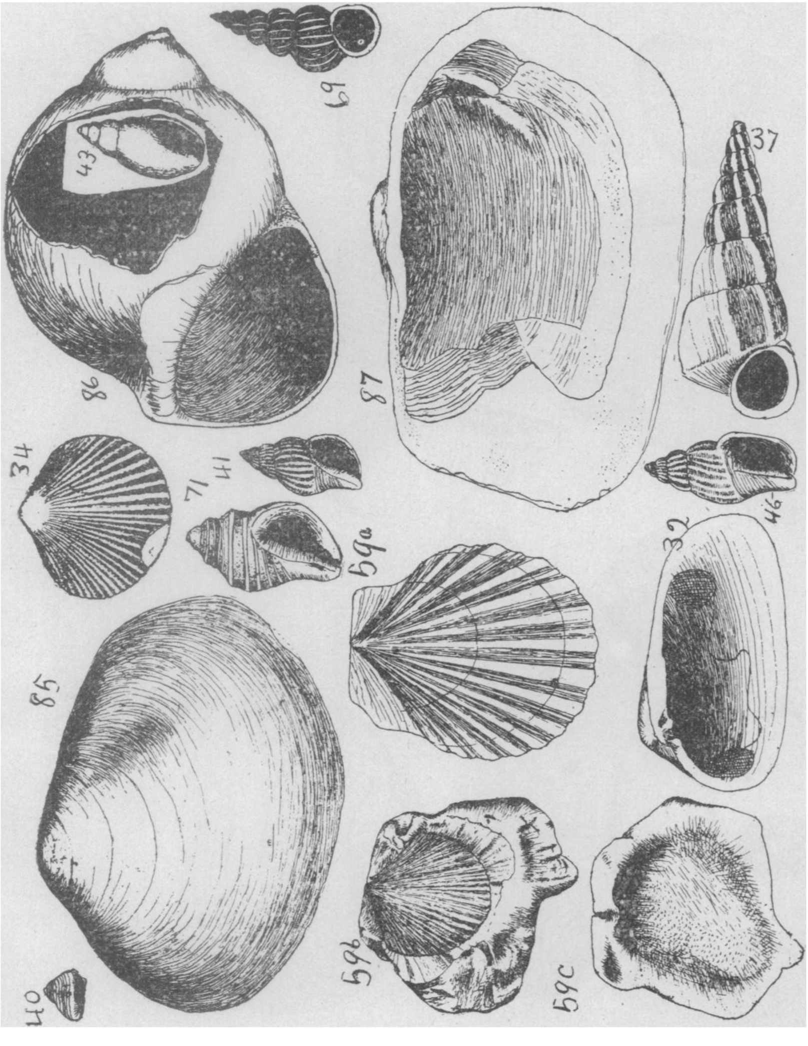

PLATE II.

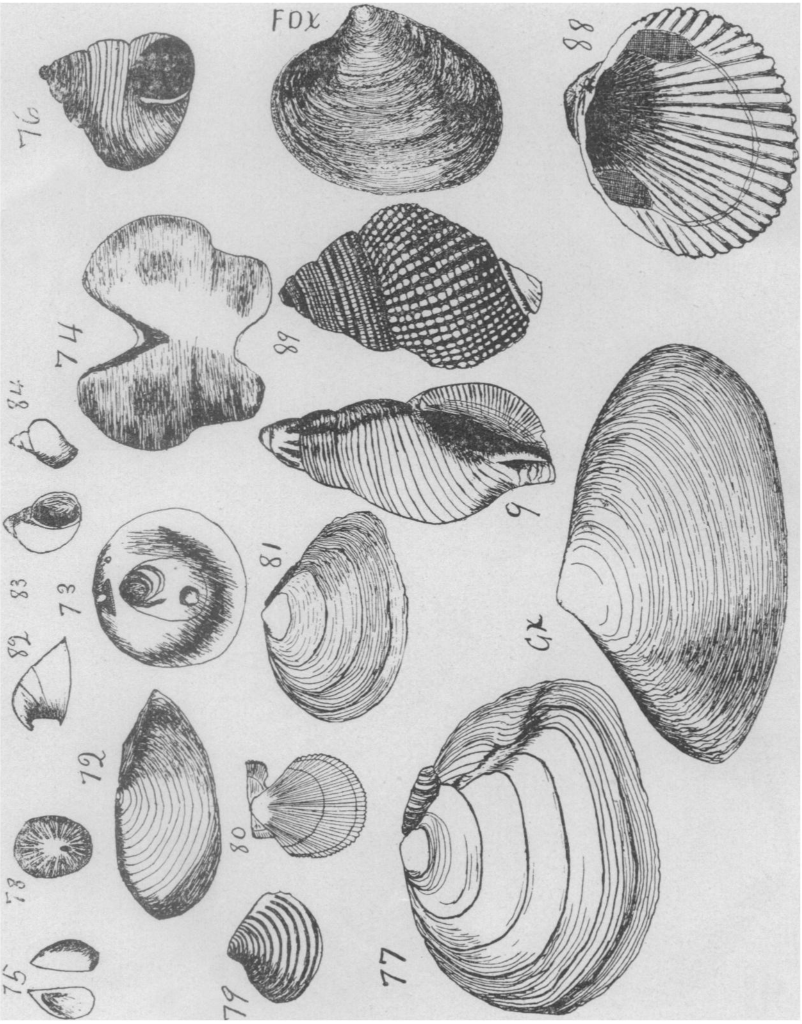

PLATE III.

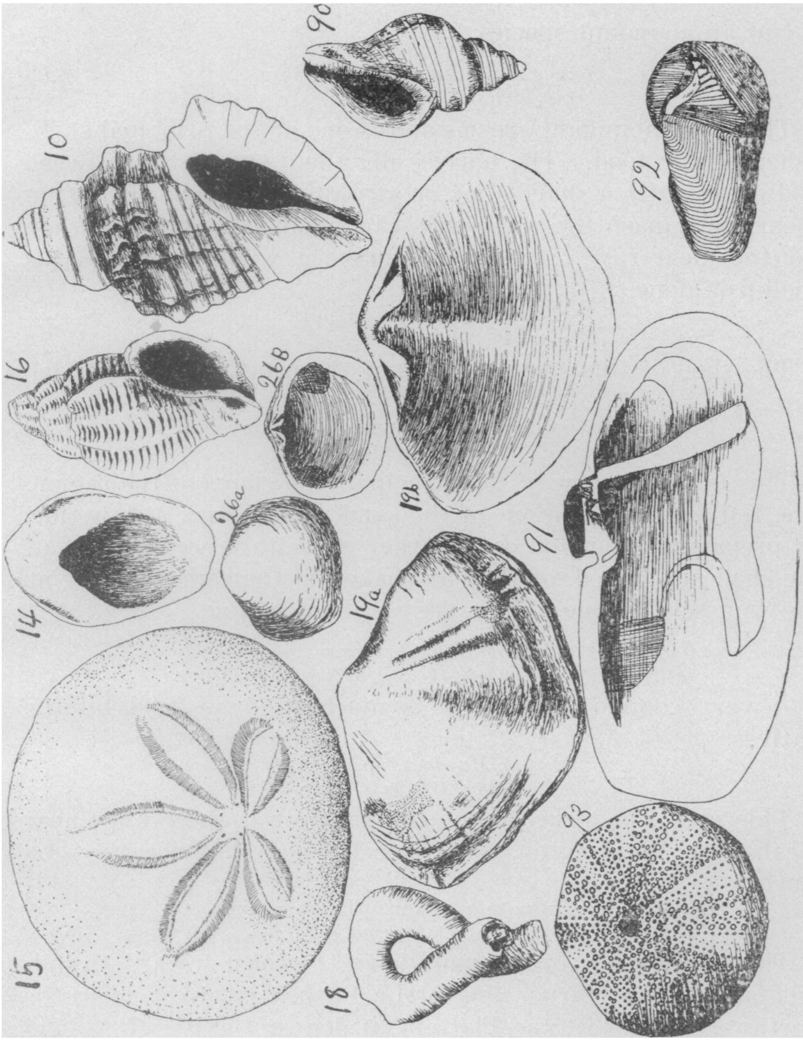

PLATE IV.

Astarte compacta.

Plate III, fig. 79.

Only one specimen of this species was obtained.

Cardium nuttallii Mart.

Plate II, fig. 34.

Not an abundant species.

Tapes staminea Conrad. Clam.

Plate I, figs. 8*a*, *b*.

This is an abundant species and is one of the principal shell-fish used for food. The natives dig them out of the seaweed and gravel with a sharp stick or a pointed iron rod. In eating them they smash the shell with a hammer or a rock and then eat the meat raw. They often make a whole meal on this shell-fish alone.

Tellina bodegensis Hinds.

Plate III, fig. GX.

The shell of this species is one of the prettiest of the beach here.

Macoma inquinata Deshayes. Common clam.

Plate I, figs. 24*a*, *b*.

This is another one of the principal food clams of the region. The Indians dig them out of the sand with a stick at low tide. In preparing them for eating, they are either scraped out of the shell and boiled, or they are baked in the same manner as the "mussels" above. They are excellent eating.

Macoma nasuta Conrad.

Plate III, fig. 81.

A very common shell. It is much used as food by the natives.

Macoma, sp.

Plate III, fig. 77.

This shell was picked up on the strait of Juan de Fuca near Neah bay, Washington. The species does not occur at La Push.

Siliqua patula Dixon. Razor clam.

Plate IV, fig. 91.

This species is very common down the coast toward Grandville and Gray's Harbor; but at La Push it is rare, and to the northwest of it, to Cape Flattery, it does not exist. It is said to be the most delicious clam on the coast.

Schizothærus nuttallii Conrad. Horse clam.

Plate II, fig. 85.

This is a very common clam. It is coarse-meated, and consequently is not hunted much by the natives. When used it is usually dried for winter use.

Cryptochiton stellere Middleton. Giant chiton.
Plate III, fig. 74. (Showing plate only.)

This "Chinese slipper" is very common. It is pulled off of the rocks by the natives, boiled whole, then the meat is dug out and eaten. The natives relish it very much.

Acmæa pelta Eschscholtz.
Plate I, fig. 28.

Very common on rocks at tide-line. It is used as food by the natives. It is not likely that white people would relish it.

Glyphis (*Fissuridea*) *aspera* Eschscholtz.
Plate I, fig. 6.

This is a very common species and is much sought by both the natives and the whites. The former pull them off of the rocks, where they adhere in great numbers at tide-line, and use them as food; the latter string the shells on strings and use them for ornamentation and decoration.

Calliostoma costatum Martyn.
Plate III, fig. 76.

Very common in the seaweed among the rocks of the tide flats.

Margarita pupilla.
Plate II, fig. 40.

This shell, colored in purple or pink, is very pretty. It is quite abundant. It is found principally among the seaweed of the rocky coast. The shells are used for ornamentation.

Chlorostomum funebrale.
Plate I, fig. 25.

This is a very common species. It is to be found principally among the seaweed of the tide flats.

(*Litorina*) *Nassa fossata* Gould.
Plate III, fig. 89.

Only a broken specimen of this species was obtained.

Litorina scutulata Gould.
Plate III, fig. 84.

Litorina sitkana Philippi.
Plate III, fig. 83.

The last two species are found everywhere sticking to the rocks at tide-line. They are also to be found in the shallow pools left by the receding tide. The former species is black in color; the latter of a lighter hue.

Scalaria indianorum Carpenter.
Plate II, fig. 69.

This species is very rare.

Scalaria, sp.
Plate II, fig. 37.

Only one specimen of this species was secured.

Parapholus californicus Conrad.
Plate IV, fig. 92.

The specimen here drawn was found at the mouth of Jackson creek, eight miles southeast of La Push. No other specimen was seen.

Hipponyx, sp.
Plate I, fig. 3.

This species is not very plentiful.

Crepidula adunca Somerby.
Plate III, fig. 82.

Only two specimens were seen.

Crepidula adunca Somerby.
Plate IV, fig. 14.

This species is well represented along the coast.

Lunatia lewisii Gould.
Plate II, fig. 86.

Only two specimens of this species were secured, one at Neah bay, the other at La Push. The specimen from La Push, the one figured, is much broken.

Puncturella cucullata Gould.
Plate III, fig. 78.

This species is not abundant.

Nassa mendica Gould.
Plate II, fig. 41.

This is one of the numerous small shells of the rocky coast patches.

Chrysodomus dicus (*Euthria dira*) Reene.
Plate III, fig. 9.

This is a very common species in the vicinity of James island.

Murex foliatum Gmelin.
Plate I, fig. 63.

This is a rather common species.

Ocinebra lurida Middleton.
Plate IV, fig. 16.

A common and very variable species.

Ocila lyalli.
(Not drawn.)

The shell representing this species was secured at Neah bay on the strait of Juan de Fuca.

Purpura lapillus Linuæus.
Plate II, fig. 71.

Purpura crispata Chemnitz.
Plate I, fig. F9; plate IV, figs. 10 and 90.

Purpura saxicola Valenciennes.
Plate I, fig. 7.

Purpura saxicola, var.
(Not drawn.)

The *Purpura* species are the most abundant of the gastropoda, a common pailful of them has been picked off of one small rock at low tide. They are the most variable of any of the shells in sculpture and color. The *Purpura crispata* species is the most variable, especially in color. White, colorless, pink, purple, yellow and brown specimens have been picked off of the same small rock at La Push at one tide.

Olivella biplicata Somerby.
Plate I, fig. 27.

This is not an abundant species.

Amphyssa corrugata Reene.
Plate I, fig. 58.

Very common.

Tube of worm.

Plate IV, fig. 18.

Saxidomus squalidus.
Plate III, fig. FDX.

This is a very common clam.

Amycla gausapata Gould.
Plate II, fig. 43.

Not common.

Yoldia limitula Say.
Plate III, fig. 72.

This is a Puget Sound shell.